

REFLECTIVE SKANNERS

Subminiature LED S13 Series

Features:

- Smallest Detectable Object: .04 in.
- Optimum Distance to Target: .30 in.
- Field of View: .11 in.
- Maximum Usable Distance: 1.5 in.
- Small size
- Two body styles
- Shock and vibration resistant



Description:

The S13 Series includes some of the smallest skanners in the industrial sensing market. These LED units provide shock and vibration resistance, long life, and dependable operation in economical, ready to mount packages. Two body styles are available.

The S13224 and S13324 utilize infrared Light Emitting Diodes. In each, the LED energy is focused through a collimating lens and a specially matched photodetector is used to obtain optimum performance. A filter over the photodetector blocks out visible light.

Typical Applications:

- Parts inspection
- Tachometer pickup
- Unprocessed film sprocket hole detection
- General purpose sensing

Specifications: (at 25°C)

LIGHT SOURCE—LED

Input	60 mA max. with resultant voltage drop of 1.1 to 1.7 VDC; derate at 1 mA per degree above 25°C ambient
Modulated Input	120 mA max., 50% duty cycle at 1 kHz in.
Reverse Voltage	2 V max.
Spectral Emission	940 nm peak

PHOTODETECTOR

Operating Voltage	30 VDC max.
Response Time	See Response Time Chart under <i>Technical Information</i>
Spectral Response	910 nm peak; filtered to respond to less than 5% at 750 nm and less than 0.1% at 700 nm

BODY

Black anodized aluminum

TEMPERATURE

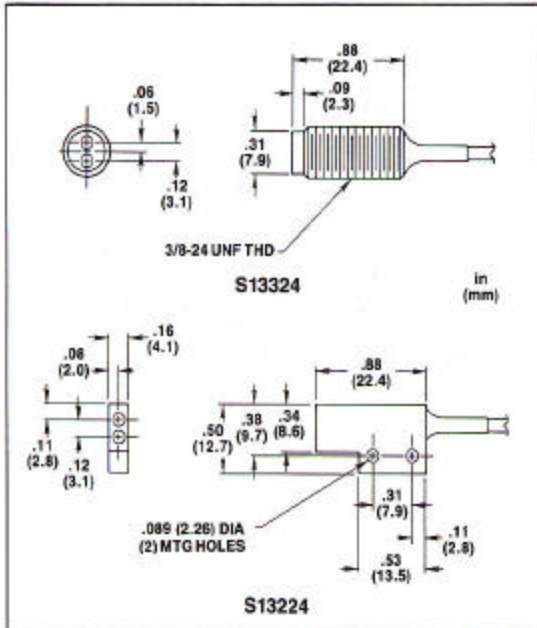
Operating: 0° to 50°C
Storage: -40° to 50°C

LEADS

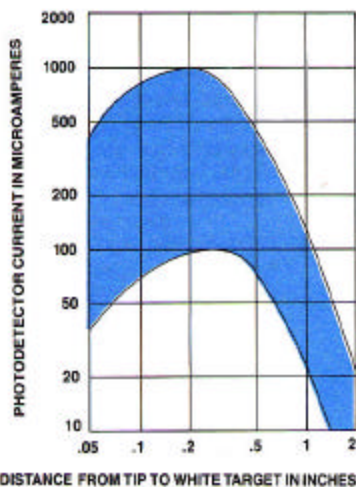
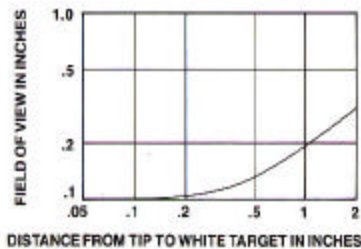
4 cond. 26 AWG., teflon covered cable with shielded photodetector leads and overall shield, 6 ft. long, Type J (Shielded Quad)

S13 Series

Dimensions:



Typical Performance Chart:



Compatibility With Controls:

The S13224 and S13324 are compatible with all Skan-A-Matic controls. For high speed operation use the T41300 High Speed Amplifier.

These skanners utilize a 60 mA Light Emitting Diode. A 68 ohm, 1/2 W current limiting resistor is supplied and must be used with Skan-A-Matic controls furnishing 5 VDC for light source power. With modulating controls such as our R42/T42 and R43/T43, a 6.8 ohm, 1/4 W current limiting resistor must be used.

Model Selection Guide:

Part #	Description
S13224	Rectangular body skanner
S13324	Threaded body skanner

Variations:

LEADS

Extra lead lengths available. See pg. 129.

Options:

COIL CORD

Four conductor, 28 gauge, coil cord with shield available in 10 ft. (fully extended) or 20 ft. (fully extended) lengths — see pg. 129.

PROTECTIVE SHEATH

Available on S13324 only. Can be factory installed over standard Type J lead (Shielded Quad). Order by adding the suffix as follows:

- M For square locked galvanized steel with black PVC jacket, 9/32" O.D. Example: S13324-M
- S For square locked stainless steel armor, 3/16" O.D. Example: S13324-S

CONNECTOR

The S13 Series skanner is available with connector installed. The mating half is furnished for field connection. Order by adding a suffix as follows.

- P For connector pair with in-line receptacle. Example: S13224-P
- F For connector pair with flanged, panel-mount receptacle. Example: S13224-F

See Options for a more detailed description.

Wiring Diagram:

